

Statue of Liberty National Monument
New York

U.S. Department of the Interior
National Park Service



STATUE OF LIBERTY NATIONAL MONUMENT NEW MUSEUM CONSTRUCTION

ENVIRONMENTAL ASSESSMENT



MAY 2016

PROJECT SUMMARY

The National Park Service (NPS) in cooperation with its partner, The Statue of Liberty – Ellis Island Foundation,¹ is proposing to construct a new 20,000-square-foot Statue of Liberty Museum within the Statue of Liberty National Monument on Liberty Island (the park).

The purpose of the project is to move the Liberty Island Museum out of the Statue's Pedestal into a new facility on the island. The project is needed because recent life-safety upgrades at the Statue of Liberty have led to revised and reduced occupancy levels inside the monument (defined as the Statue and the Pedestal). Currently, only about 20% of visitors to Liberty Island are able to explore the museum inside the Statue of Liberty. The remaining visitors to the island visit only the grounds, where there is limited space for visitors to sit or take shelter in foul weather. There is a need for both a richer interpretive experience that would be available to all visitors and indoor space for visitors during inclement weather.

The National Park Service has prepared this environmental assessment to assist in the decision-making process. This environmental assessment examines two alternatives: a no-action alternative (alternative 1) and the proposed action to construct a new museum on the northwestern portion of Liberty Island (alternative 2). Implementation of the proposed action could result in adverse impacts on the pending Statue of Liberty National Monument – Liberty Island Historic District and beneficial impacts on visitor use and experience.

This environmental assessment has been prepared in accordance with the National Environmental Policy Act and its implementing regulations (40 CFR 1500–1508) and Director's Order 12: *Conservation Planning, Environmental Impact Analysis, and Decision-making* (NPS 2011) and its accompanying handbook (NPS 2015a) to assess the alternatives and their impacts on the environment. The National Park Service is also using this environmental assessment to coordinate public review of a memorandum of agreement developed with the New York and New Jersey State Historic Preservation Officers and consulting parties in accordance with the implementing regulations for section 106 of the National Historic Preservation Act. The draft memorandum of agreement can be found in appendix B. It outlines measures to minimize and mitigate adverse effects on the monument. Comments regarding the memorandum of agreement can be submitted along with comments on the environmental assessment.

Note to Reviewers and Respondents:

If you wish to comment on this environmental assessment or on the attached memorandum of agreement, you may mail comments within 30 days to the address below or you may post them electronically at http://parkplanning.nps.gov/STL_Liberty_Museum_EA. Before including your address, phone number, email address, or other personal identifying information in your comment, you should be aware that your entire comment, including your personal identifying information, may be made publicly available at any time. While you can ask in your comment to withhold your personal identifying information from public review, the National Park Service cannot guarantee that it will be able to do so.

Statue of Liberty National Monument
ATTN: New Museum Construction Project
Ellis Island Receiving Office
Jersey City, New Jersey 07305

¹ The design and construction of the new museum is being paid for solely by The Statue of Liberty – Ellis Island Foundation. No government funds will be used.

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CHAPTER 1: PURPOSE AND NEED

INTRODUCTION

The National Park Service (NPS) in cooperation with The Statue of Liberty – Ellis Island Foundation,² is proposing to construct a new 20,000-square-foot Statue of Liberty Museum within the Statue of Liberty National Monument on Liberty Island (the park³).

This document has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality (CEQ) “Regulations for Implementing the Procedural Provisions of NEPA” (40 Code of Federal Regulations [CFR] 1500–1508), and NPS Director’s Order 12: *Conservation Planning, Environmental Impact Analysis, and Decision-making* (NPS 2011) and its accompanying handbook (NPS 2015a) to assess the alternatives and their impacts on the environment.

PURPOSE OF AND NEED FOR ACTION

The purpose of the Statue of Liberty National Monument project is to move the Liberty Island Museum out of the Statue Pedestal into a new facility on the island.

This project is needed because recent life-safety upgrades at the Statue of Liberty have led to revised and reduced occupancy levels inside the monument. Currently, only about 20% of visitors to Liberty Island are able to explore the museum inside the Statue of Liberty. The remaining visitors visit only the grounds of Liberty Island. Additionally, there is limited space for visitors to sit or take shelter in foul weather. There is a need for both a richer interpretive experience that would be available to all visitors and indoor space for visitors during inclement weather.

PROJECT AREA

The proposed action would occur on Liberty Island, a 14.1-acre island in New York Harbor located approximately 1.6 miles southwest of Manhattan. The project area is the entirety of Liberty Island (see figure 1-1); however, the majority of the proposed action would be confined to the northwest portion of the island adjacent to the Administration Building or be associated with temporary pier construction on the northern side of the island.

² The design and construction of the new museum is being paid for solely by The Statue of Liberty – Ellis Island Foundation. No government funds will be used.

³ Use of the term park refers to the entirety of Liberty Island, while use of the term monument refers specifically to the Statue and its Pedestal.



FIGURE 1-1. PROJECT AREA

ISSUES AND IMPACT TOPICS

Issues and Impact Topics Analyzed in this Environmental Assessment

An NPS interdisciplinary planning team, the public, and other agencies identified environmental issues (issues) during the scoping process. Issues are environmental problems, concerns, and opportunities regarding the proposal to construct a new museum on Liberty Island or with alternatives to the proposal. The issues describe the relationship between the actions in the proposal and alternatives and the specific resources that would be affected by those actions. In order to better understand the environmental impacts of the alternatives being considered, the National Park Service organizes the discussions of affected environment and environmental consequences by “impact topics,” which are headings that represent the affected resources associated with the issues that are analyzed in detail. The issues and corresponding impact topics retained for analysis in this environmental assessment are presented below.

- The proposed museum would be built within the pending Statue of Liberty National Monument – Liberty Island Historic District⁴ (hereafter referred to as the pending Historic District) and within

⁴ The proposed Statue of Liberty National Monument – Liberty Island Historic District is pending final approval/signature by the Keeper of the National Register.

the setting of the Statue of Liberty, which is listed on the National Register of Historic Places (National Register) and as a New York City Landmark. The proposed action must balance the need to provide enhanced visitor experience with potential adverse impacts on historic resources. This issue is addressed under the “Pending Historic District” impact topic.

- Only 20% of visitors to the park are able to explore the current museum within the Statue of Liberty Pedestal. The interpretive experience would change for the majority of visitors as a result of the new museum. This issue is addressed under the “Visitor Use and Experience” impact topic.

Issues Considered But Dismissed from Further Analysis

- Construction of the new museum may impact archeological resources. Previous archeological studies of Liberty Island have shown that the island contains significant resources from both the pre-contact and post-contact periods, and historical maps of the island also show that buildings stood in the location of the proposed museum from 1879 onward (Louis Berger 2016). The National Park Service conducted an archeological investigation of the proposed project site to determine if significant archeological remains that might be impacted by construction of the new museum are present in the area. The investigation recovered 32 artifacts, mostly shards of glass and ceramic ware; however, for the most part, the fill (other than brick rubble) was nearly sterile (Louis Berger 2016). The investigation also uncovered the foundations of at least three buildings, apparently ones shown on mapping from 1936. However, based on the excavations, it appears that the landscape was significantly modified at the time the buildings were constructed, and no evidence of an earlier landscape was discovered (Louis Berger 2016). Given the absence of significant, intact archeological resources within the proposed museum site, it was recommended in the final report that no additional archeological investigations would be needed in association with the construction of the museum at its currently proposed location. The report also recommended that archeological monitoring be conducted if excavations during construction exceed the depths reached during the archeological investigation (3.5 to 6.5 feet below ground level).

It was initially thought that underwater archeological resources may exist that could be affected by the temporary construction pier. Previous marine remote sensing investigations found several magnetic anomalies immediately offshore along the northern portion of Liberty Island near the proposed temporary construction pier. These magnetic anomalies may be indicative of significant submerged cultural resources or may be non-significant harbor debris from any number of sources (NPS 2015b). To avoid impacting any unknown submerged archeological resources, the temporary pier would be sited to avoid the magnetic anomalies.

Because no significant archeological resources were found during the archeological investigation of the proposed museum site and the temporary construction pier would be sited to avoid potential underwater archeological resources, this issue was dismissed from further analysis in this environmental assessment. However, monitoring would occur if excavations during construction of the museum exceed depths that were investigated during the archeological study.

- The World Heritage Convention, which was established in 1972, recognizes properties of “Outstanding Universal Value” that are a part of the “world heritage of mankind as a whole” and deserve “protection and transmission to future generations.” (ICOMOS 2011). Not everything within a World Heritage site contributes to an Outstanding Universal Value; however, those attributes that do contribute must be protected appropriately, and an impact assessment must be conducted when development is proposed on a World Heritage site. For its artistic and engineering achievements and symbolism, the World Heritage Committee recognized the Statue of Liberty National Monument as a World Heritage site in 1984 through inscription on the World Heritage list. Attributes contributing to the Outstanding Universal Value that would be potentially

affected by the new museum include partial views of the Statue from certain sections of New York Harbor to the northwest of the island, certain views off island, and the grounds. These attributes are medium to high in their importance in conveying the Outstanding Universal Value of the Statue, but would be negligibly impacted. While the new museum would be able to be seen from views behind the Statue, views of the Statue from almost all of New York Harbor and views of New York Harbor and the skyline would not be blocked. The views from the harbor that would be partially blocked would be those directly behind the museum and close to the island's shoreline. More than 90% of the views to and from the island would be unimpeded by the proposed action. Additionally, the grounds would be affected by the addition of a new building, but in an area that is properly cited and deferential to the monument. Because these impacts would be minimal, this issue was dismissed from further analysis in this environmental assessment. However, in compliance with the World Heritage Convention, the National Park Service will prepare a separate Heritage Impact Assessment following the 2011 guidance on Heritage Impact Assessments (ICOMOS 2011) and submit it to the World Heritage Committee for review.

- The construction, use, and dismantling of a temporary pier on the northern side of Liberty Island, to transport construction materials to and from the island, may result in adverse impacts on four species of federally listed endangered or threatened sea turtles (the Northwest Atlantic Ocean distinct population segment of loggerhead [*Caretta caretta*], Kemp's ridley [*Lepidochelys kempi*], green [*Chelonia mydas*], and leatherback [*Dermochelys coriacea*]) that may be present in the upper bay of New York Harbor). Activities associated with the pier may also impact the federally endangered shortnose sturgeon (*Acipenser brevirostrum*) and five distinct population segments of Atlantic sturgeon (*Acipenser oxyrinchus*) that are federally listed as either threatened or endangered. Impacts on these federally listed species would consist of underwater noise from pile driving and removal activities that may displace animals from feeding and resting areas, temporary habitat modification from the placement of the pilings and shading from the pier, and a very low probability of being struck by vessel traffic to and from Liberty Island. The small sediment plume generated by piling installation/removal activities is not likely to be detectable by the listed species. The National Park Service determined that these potential impacts would be insignificant because of (1) the short duration of pile driving and removal activities (less than two weeks for each), (2) the limited extent of where underwater noise impacts would occur and the ability of sturgeon and sea turtles to avoid the area, and (3) the limited area of shading (3,600 square feet) that may impede foraging and temporary loss of 113 square feet of habitat from pile placement would be small compared to the overall shallow water habitat available in Upper New York Bay. Therefore, the issue of potential impacts on threatened and endangered species has been dismissed from further analysis. The National Park Service submitted a determination of "May Affect, Not Likely to Adversely Affect" federally listed threatened and endangered species to the National Oceanic and Atmospheric Administration Fisheries Service in compliance with the requirements of section 7 of the Endangered Species Act (1973) on January 29, 2016, and received concurrence of the determination by letter dated February 23, 2016.
- The construction of a temporary pier on the northern side of Liberty Island may result in adverse impacts on essential fish habitat for multiple species and life stages. General habitats that may be impacted include benthic substrates and pelagic and surface waters. Impacts would include temporary shading of subtidal shallow waters; small temporary sediment plumes during pile installation and removal; and possible displacement of species from feeding, resting, and spawning areas caused by underwater noise from pile driving and removal activities. The National Park Service determined that these potential impacts on essential fish habitat would not be substantial because of (1) the short duration of pile driving and removal activities (less than two weeks for each), (2) the limited area of shading (3,600 square feet) that may impede foraging and temporary loss of 113 square feet of habitat from pile placement would be minimal compared

to the overall shallow water habitat available in Upper New York Bay, and (3) the fact that constructing and dismantling the temporary pier would avoid the January 15 to May 31 timeframe when winter flounder are spawning. Therefore, the issue of potential impacts on essential fish habitat was dismissed from further analysis. The National Park Service submitted an essential fish habitat assessment to the National Oceanic and Atmospheric Administration Fisheries Service in compliance with the requirements of the Magnuson-Stevens Fishery Conservation and Management Act on January 29, 2016, and received concurrence of the determination by letter dated April 4, 2016.

- The entire proposed site for the new museum on Liberty Island is located within a 100-year floodplain (FEMA 2015). Executive Order 11988, “Floodplain Management,” requires the National Park Service and other federal agencies to evaluate the likely impacts of their actions in floodplains. Executive Order 13690, “Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input,” and the associated Federal Flood Risk Management Standard (FFRMS) reinforce the guidelines stated in Executive Order 11988. Executive Order 13690 and Federal Flood Risk Management Standard guide the National Park Service and other federal agencies to use a higher flood elevation to ensure that proposed projects account for uncertainties associated with climate change. NPS Director’s Order 77-2: *Floodplain Management* and Procedural Manual 77-2: *Floodplain Management* provide the National Park Service with policies and procedures for complying with the executive orders. Executive Orders 11988 and 13690 and Director’s Order 77-2 direct the National Park Service to examine ways to avoid, as much as possible, the short- and long-term, adverse impacts associated with occupancy, modification, or destruction of floodplains and to avoid indirect support of development and new construction in such areas where a practicable alternative can be considered. While the museum would be constructed in the floodplain, there is no other practical alternative. To comply with Executive Orders 11988 and 13690, the museum would be constructed on a raised concrete structure to provide a floor elevation that is more than 3 feet above the base flood elevation. The museum would also be constructed using flood proofing standards to reduce property losses and risk to human safety. The proposed action would not alter flood flows, and impacts on floodplain functions and values would be inconsequential because of the use of floodplain mitigation techniques and compliance with applicable standards, regulations, and policies. Therefore, this issue was dismissed from further analysis. A Statement of Findings in compliance with Director’s Order 77-2 is required because the proposed project site would be located within the 100-year floodplain. A Draft Statement of Findings is provided as appendix A and is being circulated for public review and comment with this environmental assessment.
- The Department of the Interior requires its bureaus to specifically discuss and evaluate the impacts of their actions on minority and low-income populations and communities, as well as the equity of the distribution of the benefits and risk of the decision (NPS 2015a). There are no residents on Liberty Island. Local communities are far enough removed from the island such that these populations would not be particularly or disproportionately affected by activities associated with the construction of the alternatives. Therefore, the issue of environmental justice was dismissed from further analysis.
- The Department of the Interior requires its bureaus to explicitly consider effects of its actions on Indian Trust resources in environmental documents (NPS 2015a). The federal Indian Trust responsibility is a legally enforceable obligation on the part of the United States to protect tribal lands, assets, resources, and treaty rights, and it represents a duty to carry out the mandates of federal laws with respect to Native American tribes. No known Indian Trust resources are located in the project area, and the lands comprising the national monument are not held in trust by the

Secretary of the Interior for the benefit of Indians due to their status as Indians. Therefore, the issue of Indian Trust resources was dismissed from further analysis.

- Liberty Island would not be closed during construction of the new museum, but construction activities may disrupt visitors and require the temporary closure of some smaller areas of the island. Construction activities would temporarily impact the aesthetics of Liberty Island. Noise from the pile driving required for the installation of the temporary construction pier would be potentially disruptive to the visitor experience; therefore, visitor hours will be considered when scheduling pile driving activities to minimize impacts. In addition, visitor accessibility and circulation would be disrupted during the movement of artifacts, including the original torch, from the existing museum to the new museum. Visitor hours would be considered when scheduling this operation to minimize impacts. Most visitors to Liberty Island are concentrated on the southern portion of the island in the vicinity of the Statue, whereas the primary construction area would be located in the northern portion. Therefore, construction would not affect the highly visited areas of the island or the concession area. There would be a temporary closure of the west side of the plaza during construction; however, this area has experienced closures in the past and is currently closed because of other ongoing construction. Furthermore, the majority of the plaza and the remainder of the island would still be available for visitation. Because there would be minimal impacts on visitors during construction activities, the issue of construction-related impacts on visitor use was dismissed from further analysis.

CHAPTER 2: ALTERNATIVES

INTRODUCTION

The alternatives analyzed in this document are the result of internal scoping, public scoping, and agency consultation. The components of the proposed action represent the outcome of collaboration between the National Park Service, The Statue of Liberty – Ellis Island Foundation, and the consulting project team’s designers and engineers. The National Park Service explored and objectively evaluated a range of alternatives (figure 2-1). After evaluation, two alternatives were carried forward for analysis: the no-action alternative and the proposed action to construct a museum (the preferred alternative).

The no-action alternative represents a continuation of the existing visitor experience and recreational opportunities within the park with no changes to the interpretive opportunities and visitor use space, whereas the proposed action includes the construction of a new museum facility, enhanced exhibits, and useable space to improve visitor experience within the park. Early consultation with the New York and New Jersey State Historic Preservation Offices and resource professionals defined the appropriate location for the new museum and eliminated other locations for their unacceptable impacts as discussed on page 12 of this environmental assessment. Additional requirements discussed for minimizing impacts included keeping the building roof at or below the height of the Fort Wood walls and ensuring that the new construction deferred to the Statue and respected the historic building and landscape elements that the National Park Service determined to be contributing features to the island’s National Register eligibility. This consultation limited and guided the development of appropriate alternatives. The alternatives are described in more detail below.

ALTERNATIVE 1: NO ACTION

The no-action alternative represents a continuation of the existing visitor experience and recreational opportunities within the monument. Visitors to Liberty Island can walk the island grounds complemented by an audio tour that is included with the ferry ticket. Approximately 20% of visitors access the Pedestal and current museum exhibits and 3%–5% access the crown. Additionally, indoor space available for visitors to sit or shelter during inclement weather is limited to the Concessions Building and Gift Pavilion.

ALTERNATIVE 2: PROPOSED ACTION – NEW MUSEUM CONSTRUCTION

The proposed action is to construct a new 20,000-square-foot museum on Liberty Island that could accommodate up to 500 visitors at any one time. The proposed museum would be located in the northwest portion of the island adjacent to the Administration Building. The steps of the building would also serve as a seating area to view the Statue or activities that may occur in the Flag Plaza. The vegetated roof terraces and landscaping would provide a green area for reduced rain water runoff, and improved energy performance of the building. Access to the new facility would be provided by an Americans with Disabilities Act-compliant ramp designed with a 1:20 slope. The building would also be constructed to comply with the Architectural Barriers Act Accessibility Standard. The museum would be constructed on a raised concrete foundation so that the first floor would be above the base flood elevation. The museum is being designed to achieve, at a minimum, the NPS’ requirement for a Leadership in Energy and Environmental Design (LEED) Silver certification. The roofline of the proposed museum would be predominantly below the top of the Fort Wood wall at an elevation of 47 feet, 6 inches above sea level. The siting and design of the museum facility was guided by the existing landscape and the

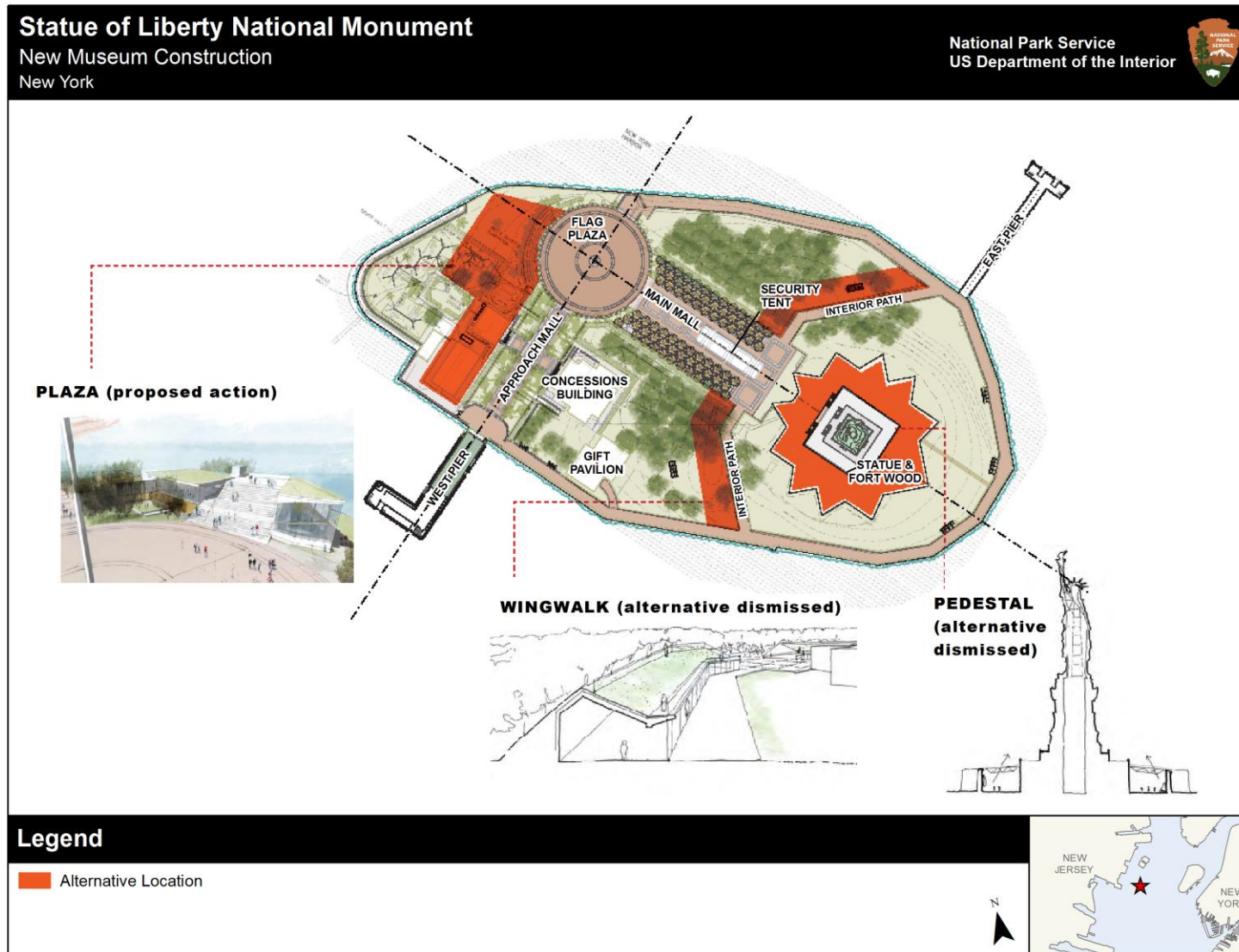


FIGURE 2-1. PROPOSED ACTION AND ALTERNATIVES DISMISSED FROM CONSIDERATION

dimensions and geometry of the Approach Mall and Main Mall. Overall, the new museum was designed to preserve the views of the Statue and of the island when approaching on or disembarking from the ferries. See figure 2-2 for a preliminary concept of the museum and figure 2-3 for a drawing that shows the height of the museum in relation to the monument.

The new museum would include the following proposed plan elements:

- gallery space and exhibits
- immersive theater
- bookstore and restrooms
- administration space, including storage, locker rooms, staff restrooms, break room, and offices
- mechanical/support space, including a mechanical room and an audiovisual/information technology room
- a green roof
- exterior stairs edging the Flag Plaza

The exhibit space would include exhibits on the history of the Statue, including her creation, initial construction and later restoration, evolving meanings, and global impact. Exhibits exploring the ideas of liberty as inspired and represented by the Statue also would be included.

The design has benefited from extensive coordination with The Statue of Liberty – Ellis Island Foundation, the New York and New Jersey State Historic Preservation Offices, the New York City Landmarks Preservation Commission, the Delaware Nation, and the Stockbridge-Munsee Tribe. Materials for the new museum would include dark or neutral tone cladding, low-reflective glass, and a green roof.

A proposed temporary construction pier would be constructed on the northern side of the island to facilitate the movement of museum construction materials to and from the island. The pier would be sited to avoid uncharacterized magnetic anomalies in the area that could be potential underwater archeological sites. It would be dismantled and removed after the completion of museum construction. The temporary pier would be approximately 20 feet wide and 180 feet long and include approximately four mooring clusters consisting of approximately five 24-inch steel pipe pile dolphins and 16 battered piles. The foundation of the pier would be constructed with approximately 20 to 25 steel pipe piles that are 18 to 24 inches in diameter and 75 feet long, and the piles would be installed using a vibratory hammer and proofed with an impact hammer to verify capacity. Construction and dismantling of the pier would be scheduled in accordance with permit requirements and would take less than two weeks for each evolution.

The construction period for the proposed action is estimated to be 24 months, depending on weather, and would not require the closure of the monument. While the park would remain open throughout the entire construction period, construction activities could necessitate the brief closure of some park areas; however, most of these areas are already closed to the public (i.e., the administrative area) or are areas that have been closed for park use in the past (e.g., the western half of Flag Plaza). Some park closures would occur when the torch is moved from its current location to the new museum. Construction is scheduled to commence once fundraising efforts are completed.

Once the museum is moved out of the Pedestal, a portion of the existing museum space in the Pedestal would be repurposed. Currently, the Pedestal includes the torch lobby (957 square feet), the torch exhibit on the balcony (95 square feet), and the main museum exhibit area (1,694 square feet) for a total of 2,746 square feet of existing museum space. The torch lobby and balcony would continue to house some type of interpretive exhibits for the public, but the main museum exhibit area would be converted back into administrative space.



FIGURE 2-2. PRELIMINARY STATUE OF LIBERTY MUSEUM CONCEPT

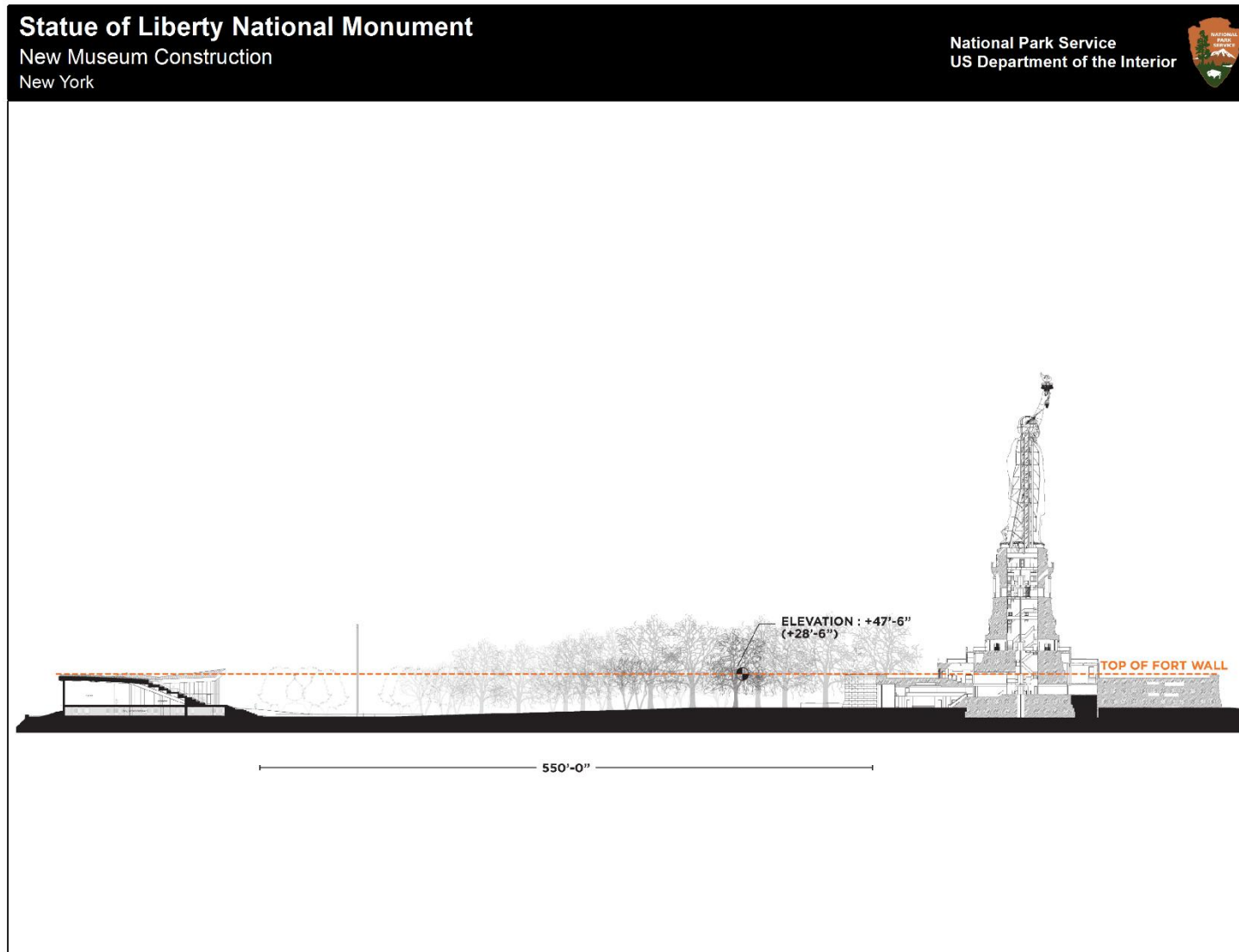


FIGURE 2-3. RELATIONSHIP OF THE NEW MUSEUM TO THE MONUMENT

ALTERNATIVES/ELEMENTS CONSIDERED BUT DISMISSED FROM FURTHER ANALYSIS

Several alternatives or alternative elements were identified during the design process and internal and public scoping. These alternatives were determined to be unreasonable or resulted in fewer benefits or greater adverse impacts than similar options included in the analysis and were therefore not carried forward for analysis in this environmental assessment.

New Pedestal Museum

A new larger museum in the Pedestal of the Statue was considered (figure 2-1). This alternative would eliminate any new, visible construction on Liberty Island that could impact the pending Historic District, and it would consolidate visitors at the Statue, which is the natural attraction point on the island. While a new, larger museum in the Pedestal would allow more visitors to experience it than can experience the current museum, due to occupancy codes for the Statue and the Pedestal, the number of visitors would still be limited, which does not meet the need for the proposed action. It would also require a major change to security protocol. All visitors to Liberty Island would have to be screened before entering the monument, requiring an increase to the size of the screening operations facilities. Items such as liquids, strollers and backpacks would continue to be prohibited. The alternative would also require constructing new openings in the Fort Wood walls for entrances, which would adversely impact the historic structure. Additionally, the National Park Service recently invested in newly constructed/improved mechanical, electrical, and plumbing infrastructure, which would need to be relocated under this alternative to service the new museum in the Pedestal; the cost of which would be prohibitive. Finally, the monument would need to be closed to the public during construction. For these reasons, this alternative was not considered further.

Wingwalk Museum

Under this alternative, two park pavilions with landscaped, occupied roofs along the Interior Paths would be constructed (figure 2-1). The two pavilions would minimize the amount of new construction required and would provide visitors with a non-linear experience. Because the location of the alternative would adversely impact the archeologically important shell midden on the island and create significant changes to the existing treed landscape (a contributing, historic associated feature for the pending Historic District), this alternative was not considered further.

Plaza Museum with Access through the Administrative Building

Under this alternative, the new museum would be constructed at its currently proposed location, but public access to the museum would be through the Administrative Building instead of the currently proposed stairs along the Flag Plaza. Under this alternative it would be difficult to get the public from the Administration Building up to the appropriate level needed to enter the museum because the floor of the museum needs to be at an elevation of 19 feet to place it above the base flood elevation. In addition, having visitors walk through the Administration Building would disrupt the operational functions of the building. For these two reasons, this alternative was not considered further.

MITIGATION MEASURES INCORPORATED INTO THE PROPOSED ACTION

The National Park Service places a strong emphasis on avoiding, minimizing, and mitigating potentially adverse environmental impacts. To help ensure the protection of natural and cultural resources and the

quality of the visitor experience, the following protective measures would be implemented as part of the proposed action. The National Park Service would implement an appropriate level of monitoring throughout the construction process to help ensure that protective measures are being properly implemented and achieving their intended results.

Biological Resources

- The removal of any trees that may provide nesting habitat for migratory birds would not occur between April 1 and July 31.
- To protect essential fish habitat, in-water work for constructing and dismantling the temporary pier would not occur between January 15 and May 31, and any other mitigation measures identified during the permitting process for the temporary pier would also be followed.
- To minimize potential effects of underwater noise caused by pile driving, nylon cushion blocks would be used during impact hammering of the piles.
- Pile installation would begin with a reduced blow energy soft start to minimize the initial effects of noise and give any potentially affected species time to vacate the area before higher energies are used.

Cultural Resources

- The proposed action would result in a finding of *adverse effect* on historic properties under section 106 of the National Historic Preservation Act. The National Park Service would enter into a memorandum of agreement with the New York and New Jersey State Historic Preservation Offices, interested tribes, and other consulting parties. The memorandum of agreement would outline a process for avoiding, minimizing, or mitigating any adverse effects. A draft of the memorandum of agreement can be found in appendix B. If the National Park Service and the consulting parties deem it appropriate, monitoring for archeological resources may be conducted during ground-disturbing activities associated with the construction of the new museum.

Floodplains

- During project development and construction, measures to minimize and mitigate impacts to sensitive resources would be applied.
- During site preparation, existing vegetation would be removed only as required and to the limits necessary to construct the proposed project.
- Final site restoration would include the revegetation or other surface treatment of areas previously disturbed by construction activities.
- Native plant seed mixtures and plant materials approved by NPS staff would be used for rehabilitating and revegetating disturbed areas.
- Erosion and sediment control measures would be designed in accordance with federal, state, and local regulations, requirements, and codes and the specifications of best management practices. Examples include silt fences, inlet protection, sediment basins, vegetative buffers, swales, flow diversions, and dams/barriers (NYS DEC 2005).

Visitor Use and Experience

- The majority of Liberty Island would remain open to the public for the duration of construction.

- Public information would be made available on the park website and on signs in the park to inform visitors about the construction.
- Visiting hours would be considered when scheduling pile driving activities for constructing the foundation of the museum and for constructing and dismantling the temporary pier.
- Visiting hours would be considered when scheduling the transfer of artifacts from the current museum to the new museum.

CHAPTER 3: AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This chapter of the environmental assessment describes existing environmental conditions in the areas potentially affected by the alternatives evaluated and the environmental impacts associated with each alternative.

GENERAL METHODOLOGY FOR ANALYZING IMPACTS

In accordance with CEQ regulations, direct, indirect, and cumulative impacts are described (40 CFR 1502.16) and the impacts are assessed in terms of context and intensity (40 CFR 1508.27). Where appropriate, mitigating measures for adverse impacts are also described and incorporated into the evaluation of impacts.

Cumulative Impacts Analysis Method

Cumulative impacts are defined as “the impact on the environment which results from the incremental impact of the action when added to other past, present, or reasonably foreseeable future actions regardless of what agency (federal or nonfederal) or person undertakes such other actions” (40 CFR 1508.7). The temporal scale for the cumulative impacts analysis includes past actions since Hurricane Sandy through reasonably foreseeable future actions. Because of the isolated nature of Liberty Island, the geographic scale considered for cumulative impacts is Liberty Island.

Cumulative impacts are determined for each impact topic by combining the impacts of the alternative being analyzed and other past, present, and reasonably foreseeable actions that also would result in beneficial or adverse impacts. Because some of these actions are in the early planning stages, the evaluation of cumulative impacts is based on a general description of the projects. Other past, present, and reasonably foreseeable actions located on Liberty Island to be included in the cumulative impacts analysis were identified through the internal and external project scoping processes and are summarized below.

- **Hurricane Sandy Recovery Projects.** In 2012, Hurricane Sandy inundated much of Liberty Island, resulting in damage to the infrastructure, grounds, and landscaping. Multiple projects have been completed and/or proposed to aid the restoration and recovery of the island. Projects that have been completed include repair of administrative and support buildings and utilities, walkway repair and replacement, and replacement of underground exterior lighting on the Statue. Projects that are proposed include installation of four temporary modular buildings northeast of the Flag Plaza and east of the housing court, beach stabilization and seawall repair, and replacement of paving on the Approach Mall and Main Mall.
- **New Generator Building.** Hurricane Sandy submerged and damaged the diesel-powered generator at Liberty Island. A new building to house a replacement generator will be constructed adjacent to the existing incinerator building. The generator will be installed above floodplain elevation.
- **Housing Unit Demolition.** Several housing unit buildings (42, 43, and 44) within the administrative area on Liberty Island were flooded during Hurricane Sandy, resulting in damage to windows, doors, and trim as well as general flood damage that caused a loss of structural integrity. Necessary repairs and modifications required for safety and future flood protection were determined to be infeasible, and the buildings were demolished.

- **Tree Replacement Projects.** There are several ongoing landscaping projects at Liberty Island. Many trees and shrubs on the island are dead or in declining health as they reach the end of their lifespan or as a result of damage from the salt intrusion caused by Hurricane Sandy storm surge. Trees and stumps will be removed from several locations on the island, including the facilities area, Approach Mall, northeast lawn, and southeast lawn. Salt-tolerant replacement tree species will be planted in the Approach Mall and Main Mall. Hedges and lawn areas disturbed during the tree replacement projects will also be replaced. In addition to tree replacement as described above, proposed tree panel rehabilitation will include soil improvement, removal of steel edging around trees, and installation of a new irrigation system.
- **New Fence around Fort Wood.** Currently, the pedestrian barrier around the Fort Wood lawn area consists of temporary crowd control fencing that is not compatible with the setting for the Statue of Liberty. Permanent fencing along the existing knee wall is proposed to protect the lawn and irrigation repairs made following Hurricane Sandy. The fencing would consist of metal mesh with three gates for access to the lawn and the Sally Port Plaza. A gravel mow strip would facilitate lawn maintenance.
- **Replacement of Temporary Security Screening Tent with Permanent Structure.** Following 9/11, a temporary security screening tent was erected on the Main Mall to screen visitors before entering into the Pedestal and Statue. Recently there have been discussions concerning the replacement of the temporary tent with a permanent weather-resistant structure. The new structure likely will have the same or smaller footprint as the current temporary structure.

PENDING HISTORIC DISTRICT

Affected Environment

The affected environment for this project includes all of Liberty Island, which is located within New York Harbor. Owned by the National Park Service, the island is served by ferries running regularly from New York and New Jersey. The Statue of Liberty is located on the southern portion of the island and is surrounded by lawns. A paved system of malls and plazas, lined with trees and hedges, form the island's primary circulation system and give it a park-like feel.

A park-atmosphere with wooded lawns were part of Frederic-Auguste Bartholdi's, the Statue's sculptor, original vision of integrating wooded lawns into the monumental landscape. Bartholdi envisioned that the lawns would serve as a respite to visitors from the more active areas around the island. The concept was carried out in the island's plantings, through the partial implementation of the master plan between 1939 and 1957 (NPS 2015c).

Norman Newton's 1939 master plan was the catalyst for the transformation of the island and drove the development of the monument grounds for the next 40 years. The plan laid the framework for directing circulation, creating distinct use zones, and controlling vistas of the Statue and New York Harbor in order to heighten a visitor's experience of the monument" (NPS 2010).

Many elements of the master plan were implemented by the late 1950s. In 1986, major changes to the island to accommodate the expected influx of visitors to the site during the centennial of the Statue included the introduction of red brick paving and the redesign of the Flag Plaza, Approach Mall and Main Mall by landscape architects Zion & Breen. At the time, these changes were not considered irrevocable and "future planning efforts could be instrumental in restoring the historic feel, materials and workmanship of these landscape elements" (NPS 2010). The current draft cultural landscape report (Berg 1999) reassessed the impact of the changes and determined that the changes were sufficient to remove the primary circulation system from consideration as a contributing landscape or architectural resource, and the pending Historic District reflects that opinion. However, the primary circulation system still has

historical importance and is therefore considered a contributing element in the pending Historic District as a historic associated feature rather than as a contributing landscape or architectural resource.

The Statue of Liberty National Monument includes Liberty Island, which was listed administratively on the National Register in 1966, and Ellis Island, which was listed administratively on the National Register in 1972. In 1976, the Statue, its base, and the land surrounding it were designated a New York City Landmark. A National Register nomination form, completed in 1981, lists only the Statue, Pedestal, and surrounding walls of historic Fort Wood as contributing features of Liberty Island. A new National Register nomination is currently being reviewed by the Keeper of the National Register. The pending nomination would create a historic district that would encompass all of Liberty Island. Contributing and non-contributing resources to the pending Historic District are listed in table 3-1 and shown in figure 3-1.

TABLE 3-1. PENDING STATUE OF LIBERTY NATIONAL MONUMENT – LIBERTY ISLAND HISTORIC DISTRICT RESOURCES

Resource Name	National Register Property Type	Year Built
Contributing Resources		
Statue of Liberty Enlightening the World	Structure	1886
Fort Wood Walls	Structure	1811
Seawall	Structure	1842–1950
Administration Building	Building	1941
Concessions Building	Building	1941
Superintendent's House	Building	1952
Triplex Housing Unit	Building	1952
Duplex Housing Unit	Building	1952
Utility Building 2012	Building	1957
Liberty Island Grounds	Site	1939–1957
<i>Historic Associated Features</i>		
Primary Circulation System	Feature	1940-1952, altered 1986
Secondary Circulation System	Feature	1941-1952
Plantings	Feature	1940-1956
Shell Midden Site	Site	c. 1000 A.D.
Historic Midden #1 Site	Site	c. 1794–1811
Non-Contributing Resources		
Maintenance Garage	Building	1986
Gift Pavilion	Building	2010
Snack Booth	Building	c. 1998
Information Booth	Building	2012
West Pier	Structure	1951, rebuilt 1986, repaired 2014
East Pier	Structure	c. 1965, rebuilt 2013
Security Tent	Structure	2002–2004
Sculptural Grouping	Object	1984
Vigsnes Mine, Norway Copper Specimen	Object	1986

Source: NPS 2015c

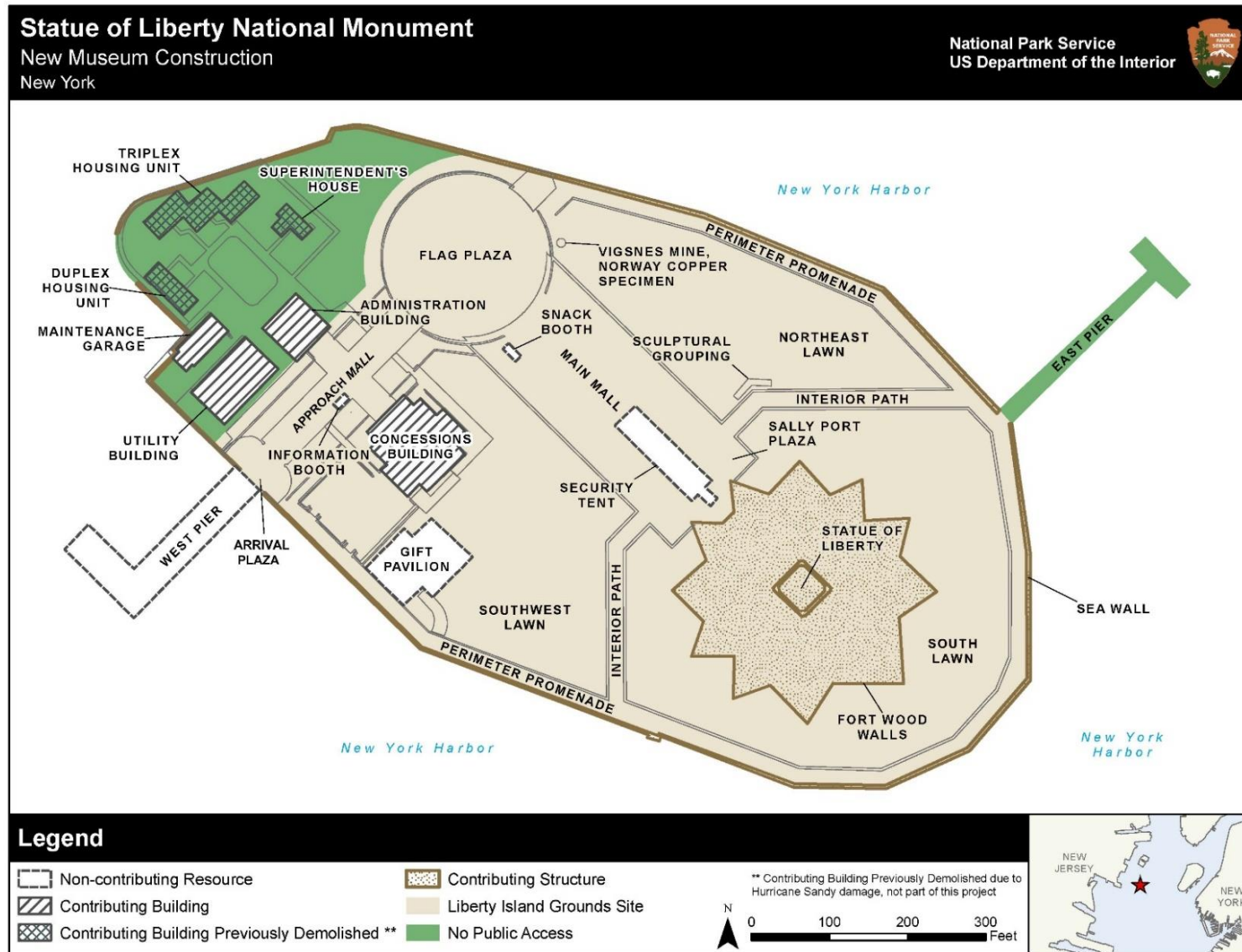


FIGURE 3-1. PENDING STATUE OF LIBERTY HISTORIC DISTRICT

The Statue of Liberty, consisting of the copper statue of *Liberty Enlightening the World*, its Pedestal, and the Fort Wood walls, is the pending Historic District's most important resource and possesses significance in the areas of politics/government and social history as an internationally recognized symbol of the American way of life. The Statue was initially conceived as a gift of the French people to the American people to commemorate the centennial anniversary of US Independence in 1876 and the mutual friendship of the two nations during their respective quests to establish free democratic forms of government.

The grounds and support buildings created by the master plan are secondary to the monument itself. The public side of the island provides the setting for the Statue and the buildings that house tourist and administrative functions. This setting derives its significance from the 1939 master plan that envisioned a series of axial paths that draw visitors to the Statue and specific views and then secondary paths around the Statue. In keeping with Bartholdi's vision that the Statue would protrude from a tree-covered island, the Statue rises up out of lawns surrounded by trees, with the support buildings (Administrative Building and Concessions Building) relegated to the back of the Statue. This trend has continued despite the addition of later buildings (the Screening Tent and Gift Pavilion), and the 1986 changes to the circulation system.

The part of the island closed to the public includes maintenance facilities, and until recently, housing for park staff. Although the staff housing was part of the original master planning effort, most of the housing was used for administrative functions until Hurricane Sandy inundated them, and they were demolished.

Primary elements of the pending Historic District in or next to the proposed museum site include the following:

- Primary circulation system (including the Flag Plaza and plantings)
- Secondary circulation system
- Administration Building

Additionally, views to and from Liberty Island could be affected by the project. These elements are described in further detail below.

The primary circulation system forms the on-island component of the arrival sequence that NPS planners conceived in 1939, slightly altered in the 1940s and 1950s, and made major modifications to in 1986. It was intended to convey visitors from their arrival point at the West Pier to the main entrance of the Statue. The 1986 modifications changed the basic design intent from that of a crossing of the two primary circulation axes emphasizing the process of procession towards the monument to one where the Flag Plaza serves as more of a terminus of the two malls, creating more of a piazza-like setting. The primary circulation system consists of six elements: Arrival Plaza, Approach Mall, Flag Plaza, Flag Pole, Main Mall, and Sally Port Plaza. The significant associated plantings identified with the primary circulation system include grass panels that extend east to west to the intersection with the Main Plaza. London plane trees are scattered throughout these grass panels and provide a shaded canopy. Low yew hedges planted in 1986 edge the grass panels on either side.

Certain elements of the primary circulation system following the 1986 redesign, most notably the Flag Plaza, have been less successful than others. The Flag Plaza was originally envisioned as a simple cross axis to orient visitors to the site. The 1986 modifications changed this vision into a piazza-like gathering space, increasing the size substantially, changing the shape from rectangular to round, removing the central grassy area, moving the flagpole, and replacing the original light-colored pavement of the entire primary circulation system with red brick. It has been so unsuccessful that it is no longer considered of importance as a landscape feature or as an architectural form.

The secondary circulation system consists of the Perimeter Promenade and Interior Paths. The Perimeter Promenade is an approximately 20-foot-wide footpath that begins on the south side at the Arrival Plaza,

runs along the seawall around the south end of the island, and ends at the scenic overlook on the east side of the island. Two Interior Paths were constructed in 1941 to provide an alternate route to the Statue from the Perimeter Promenade. They run east-west across the island at the south edge of the northeast and southwest lawns from the Perimeter Promenade to meet in the middle at the Sally Port Plaza.

The Administration Building is a rectangular, two-story, five-bay by five-bay, brick-and-steel-frame building constructed in 1941 in a restrained Art Moderne (stripped Federal Classicist) style. Facing south across the Approach Mall, it sits within a well-established landscape of trees and grass panels and is ringed with concrete access paths.

The building retains its characteristic Art Moderne streamlined form, smooth stone surface, and symmetry with the main entrance, which consists of a single-light aluminum door with a single sidelight and plate glass transom in an unadorned opening, in the center of the facade. Windows on the north (rear) elevation consist of two single-pane, fixed vinyl windows in the center; two smaller, three-pane fixed aluminum windows on the east end; and a two-pane, fixed aluminum window on the west end. All the windows are set in unadorned brick openings with granite sills. An aluminum sign reading “National Park Service” is located above the main entrance on the facade.

The Administration Building has been expanded several times since its construction in 1941. In 1950, in response to increasing attendance at the monument, the building was enlarged with a rear addition and its original open front entrance porch was enclosed. A second story was constructed on the rear of the building in 1995–1996. The Administration Building was one of two major buildings included in the original master plan, and through its design and placement was intended to be inconspicuous and distant from the Statue, following the general NPS principle that park infrastructure should defer to the primary resource (NPS 2015c). Additionally the building, along with the Concessions Building across the Approach Mall, frame views to the northwest and serve as a three-dimensional guide to move visitors up the mall.

Bartholdi chose Liberty Island because the location satisfied two major criteria for placement of the Statue—it could be seen from a great distance and it could stand alone. The 1999 draft cultural landscape report identified four major groupings of important views from the island outward, with the most important being frontal views. These views were so important to the National Park Service that visitors were routed around the island to experience them. One grouping adjacent to the proposed project site looks east from the Approach Mall towards the flagpole with the New York skyline in the background and Ellis Island off to the northeast (Berg 1999). The narrow view was intended to open up as the visitors reach the flagpole. The views from the Flag Plaza are now partially obscured by a row of trees. The view opens up from the eastern edge of the Flag Plaza at the intersection with the northeast section of the Perimeter Promenade.

Views from Ellis Island demonstrate the primacy of the Statue in the land and seascape. The flagpole is barely visible. The same dominance holds true for the views from Liberty State Park in New Jersey. Some views directly across from Liberty Island provide views of the Statue and portions of the Pedestal base that are above the tree line.

Environmental Consequences

Methodology and Assumptions

This analysis assesses the impacts of the alternatives on the pending Historic District for the Statue of Liberty National Monument. Impacts on historic properties can be direct or indirect as well as beneficial or adverse. Direct impacts are those that physically alter the setting or character of the pending Historic District as a result of the implementation of an activity, while indirect impacts are those that may occur inadvertently during or after an activity.

Adverse impacts are those that alter character-defining features of a historic property or district in a way that could change its character or eligibility for the National Register. Beneficial impacts are those that promote the retention of important characteristics or settings associated with a historic property or district.

Impacts are analyzed within the context of a particular resource and the intensity or severity of the impact. In this case, the context for the impact analysis is the pending Statue of Liberty National Monument – Liberty Island Historic District. Intensity is considered to be the degree to which the pending Historic District would be altered and whether that alteration would result in a change to its historic nature or eligibility for listing in the National Register.

Study Area

The study area for this project includes all of Liberty Island and its immediate offshore surroundings, including the extent of the existing piers and the proposed temporary construction pier.

Impacts of Alternative 1: No Action

Analysis

Under alternative 1, the existing museum would remain at its current location in the Pedestal of the Statue. No new construction would occur within the pending Historic District, and the pending Historic District would not be affected.

Cumulative Impacts

Because the pending Historic District would not be affected, no cumulative impacts would occur.

Conclusion

The pending Historic District would not be affected under this alternative and there would be no cumulative impacts.

Impacts of Alternative 2: Proposed Action – New Museum Construction

Analysis

Under alternative 2, the Statue of Liberty Museum would be constructed within the boundaries of the pending Historic District. No contributing elements to the pending Historic District are located directly within the footprint of the new construction, though the steps of the new museum would slightly encroach on the Flag Plaza.

The addition of the new museum would change the setting and feel of a portion of the pending Historic District and insert a new element into a historic resource because it would be adjacent to portions of the primary and secondary circulation systems and the Administration Building, all of which are contributing features to the pending Historic District.

While design of the museum is not yet complete, continuous efforts are being made to ensure that the proposed museum would be deferential to the Statue, and its impacts would be minimized. The major mass of the building would be off axis from the axis of the Main Mall. Glass walls in the design would use low-reflective glass and would be shaded by a deep overhang, while the overall exterior cladding materials would be a non-reflective material and subdued in color and tone. To further minimize visual impacts, the roof would be a green roof that emulates the topography of the northwestern portion of the island. Although these efforts greatly minimize impacts on the pending Historic District, they would not completely remove the adverse impact, primarily because the proposed action would introduce a new element into the pending Historic District.

The proposed Statue of Liberty Museum may be visible from various vantage points off-island, such as Ellis Island and Liberty Park in New Jersey. The views from Ellis Island would be minimally disturbed, and the view of the Statue and the New York Skyline would so dominate the land and sea scape, that the proposed museum would have minimal impact. The few views from Liberty Park would be minimally affected because Liberty Park is located off axis from the Statue. The museum's location has been planned to minimize the length of time ferry passengers approaching from the north and east would see the building. Using exterior cladding materials that are subdued in color and tone and optimizing tree placement would also help minimize the length of time ferry passengers would see the building.

The proposed landscaping would open up the eastern side of the Flag Plaza, permitting vistas up the Hudson River and towards Ellis Island providing a visual connection between the first landing place for many immigrants and the great symbol of the United States. It opens up one of the four major views identified as key in the 1999 draft cultural landscape report. In keeping with the accepted practice concerning the insertion of a new building into a historic district, the proposed museum's design would not emulate any style existing on the island and would not attempt to duplicate or mimic the appearance of any contributing element to the pending Historic District to avoid creating any false historicism.

The existing museum space in the Pedestal would become administrative space; however, this change would not require modifications to any historic fabric within the interior space. Some of the space in the Pedestal may also be used for check-in for visitors accessing the crown, allowing for the secondary screening area outside the Statue to be smaller.

Cumulative Impacts

In 2012, Hurricane Sandy inundated much of Liberty Island, resulting in damage to the infrastructure, grounds, and landscaping. Multiple projects have been completed and/or are proposed to aid the restoration and recovery of the island, including a new generator building adjacent to the existing incinerator, repair to administrative and support buildings and utilities, walkway repair and replacement, and replacement of underground exterior lighting of the Statue. All of the aforementioned projects will have a beneficial effect on the pending Historic District. Housing unit buildings (42, 43, and 44) were flooded during the hurricane and have been demolished. This action had a noticeable impact on the pending Historic District because of the loss of contributing structures; however, because the buildings were never seen by the public and were secondary to the Statue, the loss is not significant.

In addition, several tree replacement projects are ongoing, and a permanent fence along the existing knee wall around the Statue is proposed to protect the lawn and replace the existing temporary crowd control fencing that is not compatible with the setting for the Statue of Liberty. These projects will provide additional beneficial effects. Following the terrorist attacks on 9/11, a temporary security screening tent was erected on the Main Mall. Replacing the structure with a permanent structure that has a smaller footprint and is more in keeping with the setting of the Statue would provide beneficial impacts on the proposed Historic District. Overall, these projects would have beneficial cumulative impacts on the proposed Historic District.

Construction of the proposed new museum would have an adverse impact on the pending Historic District, but proper siting and design of the building would minimize the effect. Therefore, when combined with the impacts from other past, present, and future projects on Liberty Island, the new museum would contribute an adverse increment to cumulative impacts that are otherwise largely beneficial.

Conclusion

Constructing a new museum on the northwest portion of Liberty Island would introduce a new structure into the pending Historic District. The steps of the museum would also slightly encroach on the Flag Plaza, which, as a part of the primary circulation system, is a contributing resource (historic associated

feature) to the pending Historic District. As a result, the new museum would have a direct, adverse impact on the landscape and character of the site, altering the setting and feel of the overall pending Historic District and contributing an adverse increment to cumulative impacts that are otherwise largely beneficial. While the museum's location is the best site for the building, it is not possible to avoid an adverse impact. However, the National Park Service has engaged in extensive consultation with the New York and New Jersey State Historic Preservation Offices, the New York City Landmarks Preservation Commission, the Delaware Nation and Stockbridge-Munsee Tribe, and The Statue of Liberty – Ellis Island Foundation and made a conscious effort to minimize the impact of the museum structure. The site selected is not in an area that is key to the comprehension of the significance of the pending Historic District or the monument, and its visual impact is expected to be minimized by its low-sloping massing, green roof, low-reflective glass, and the subdued color and tone of its exterior.

VISITOR USE AND EXPERIENCE

Affected Environment

As a universal icon of freedom and democracy, the Statue of Liberty National Monument has become a popular national tourist destination, attracting several million visitors annually. As a result, the park places great value on visitor use and experience. Visitor use and experience encompasses the way in which people use, participate in, and perceive the facilities and amenities within Liberty Island. Table 3-2 presents annual visitation statistics for Liberty Island from 2000 to 2015. Average visitation to the park over the last 5 years from 2011–2015 was 3,487,071 people. Monthly visitation recorded in 2015, presented in table 3-3, illustrates the seasonal nature of visitation with peak attendance during the summer months.

TABLE 3-2. ANNUAL VISITATION FROM 2000–2015

Year	Number of Visitors	Year	Number of Visitors
2015	4,279,020	2007	3,394,470
2014	4,198,833	2006	3,275,494
2013	1,883,544	2005	3,307,689
2012	3,315,056	2004	2,901,127
2011	3,758,906	2003	2,560,722
2010	3,833,556	2002	2,682,274
2009	3,829,711	2001	3,397,062
2008	3,565,500	2000	4,366,455

Source: NPS 2016

TABLE 3-3. MONTHLY VISITATION RECORDED FOR 2015

Month	Number of Visitors	Month	Number of Visitors	Month	Number of Visitors
Jan	135,389	May	456,962	Sep	373,881
Feb	112,500	Jun	494,904	Oct	355,219
Mar	244,725	Jul	608,261	Nov	256,916
Apr	377,152	Aug	587,099	Dec	276,012
Total	4,279,020				

Source: NPS 2016

Visitor use and experience at Liberty Island is affected by the ability to enjoy the various amenities on the island (see figure 1-1).

The Monument

Views of the monument are an important aspect of visitor use and experience and have been documented extensively from numerous locations in New York, New Jersey, and New York Harbor. Glimpses of the Statue can be seen from other locations farther out, depending on various factors such as topography and air quality. Historically, the most poignant views of the Statue were from New York Harbor, where millions of immigrants passed by her on their entry into the United States. The ferry to Liberty Island allows visitors to capture views of the Statue and Liberty Island from the water.

Features within the Monument

The 1,694-square-foot Liberty Island Museum is located in the lobby of the Pedestal and chronicles the difficulties and triumphs that France and the United States overcame to build this symbol of freedom. The museum also covers how the Statue of Liberty's interpretation has changed since its construction in 1886. Access to the museum requires advance ticket reservations for either the Pedestal or crown and is not available to visitors with a grounds-only ticket. Due to occupancy constraints, roughly 3,000 visitors daily (between 15%–20% of visitors during peak summer attendance) are allowed to reserve a ticket to the Pedestal, with roughly 240 visitors allowed to visit the crown on any given day.

The Statue's base and Pedestal include portions of the historic Fort Wood and the original structural pedestal walls. The entry lobby of the monument contains the original 1886 torch and elevators to access Level 1P where the Statue of Liberty exhibit is located. The museum contains full-scale replicas of portions of the Statue and detailed information about the fabrication and construction of portions of the Pedestal and Statue. In addition to the Concessions Building and Gift Pavilion, these are the only areas that provide shelter to visitors during storms.

Flag Plaza

The Flag Plaza is located at the intersection of the two main axes on Liberty Island that connect the visitor dock (West Pier) and the Main Mall leading to the monument. It is a public gathering spot for tours and is also occasionally used for special events.

Perimeter Promenade

The Perimeter Promenade encircles the majority of the eastern perimeter of Liberty Island between the visitor dock and the Flag Plaza. It is fully accessible and open for visitor use and enables some of the best views of the monument (see figure 1-1) and the adjacent skylines.

National Park Service Concessions

Part of the concessionaire's retail operation formerly occupied a long white tent on the Main Mall leading to the entrance of the monument. This tent recently has been removed and replaced with a new light-weight construction, temporary, retail pavilion (Gift Pavilion) with visitor restrooms adjacent to the food and beverage building (Concessions Building) on the west side of Liberty Island.

Tours

Park rangers provide English-language guided tours around Liberty Island throughout the day. Tours provide a general history of the island and the Statue, including why and how the Statue was made; important figures in the Statue's construction; Liberty Island history; symbolism associated with the Statue of Liberty; and the 1980 restoration project. Self-guided audio tours included with the ferry ticket help visitors learn about the Statue while exploring the grounds of Liberty Island. Audio tours are provided in nine languages, and family-friendly tours designed for children ages 6–10 are available.

Visitor Use Patterns

Although no formal study has documented the pedestrian flow patterns on the island, anecdotal evidence indicates that most visitors, after leaving the ferry, disembark from the pier and head north toward the flag and east toward the Statue. The wide Perimeter Promenade around the south, east, and north shores facilitates easy access around the perimeter of the island and views of the surrounding New York City skyline and harbor.

Environmental Consequences

Methodology and Assumptions

This analysis assesses the impacts of the alternatives on visitor use and experience in and around the study area. To determine impacts, current access and visitor experience at the Statue of Liberty National Monument and the potential impacts from the proposed alternatives on access to the museum and improved opportunities for wider array of park visitors to experience the Statue were considered.

Study Area

The study area for visitor use and experience includes all of Liberty Island.

Impacts of Alternative 1: No Action

Analysis

Alternative 1 represents a continuation of the existing conditions at Liberty Island without any changes to the museum or other attractions, amenities, and features of Liberty Island; thus resulting in no impacts on visitor use and experience. Visitors wishing to view the museum would continue to be limited to those who purchase tickets that provide access to the Pedestal or crown.

Cumulative Impacts

Because there would be no impacts under alternative 1, there also would be no cumulative impacts.

Conclusion

Under alternative 1, visitors to Liberty Island would continue to be required to make advance ticket reservations to gain access to the existing museum in the Pedestal of the Statue, limiting the overwhelming majority of visitors to grounds-only tickets. Visitors with tickets to the existing museum would continue to receive additional information and benefits related to restricted access to the exhibits.

Because there would be no changes to the visitor experience, there would be no impacts and no cumulative impacts.

Impacts of Alternative 2: Proposed Action – New Museum Construction

Analysis

The new museum would enhance the experience for the majority of visitors to Liberty Island by providing access to historic artifacts and new, updated sources of interpretative history about Liberty Island and the Statue of Liberty. It would serve a wider array of audiences and vastly improve the quality of experience, especially for those visitors with grounds-only tickets, through exhibits about the Statue's history, context, and meaning.

The public space in the new museum, including exhibit space, would be much larger than the existing museum (approximately 15,000 square feet compared to 1,694 square feet) and would be available to all visitors to Liberty Island. The designed occupancy of the museum would be approximately 500 visitors, about equal to one ferry load of passengers, meaning the museum could accommodate approximately 15% of the visitors on the island (assuming a capacity of 3,500) at any one time. To optimize the number of visitors who could potentially pass through the museum, the inside spaces would be free of chairs or similar furniture to discourage stationary activities. The layout of the spaces and exhibits would also be designed to encourage constant movement through the museum, and no additional security screening would be required for visitors entering the museum. All of these design features would help minimize waiting lines and enable the greatest number of people to visit the museum and experience the Statue of Liberty and its history.

Exterior windows would be designed to provide views into the museum of the original torch, increasing the number of visitors who can view this important historical piece of the Statue. Additionally, the entry stairs would offer a place for visitors to sit and rest and contemplate the Statue and its place in America's history. Overhangs from the museum and interior spaces would also provide shelter during rainstorms or other inclement weather, increasing the number of visitors who could potentially stay dry during these events, helping to preserve their experience.

Siting the museum within the landscape and using appropriate materials and exterior textures would help blend the building into its surroundings, preserve views on the island, and maintain the central focus on the Statue. Because the museum's first floor design elevation is required to be above the 13-foot base flood elevation, the museum would be constructed on a raised concrete structure that is 10 feet higher than the adjacent Flag Plaza. Despite the raised first floor, the elevation of the museum's rooflines would be within the existing tree line, minimizing its presence from approaching ferries and preserving unobstructed views of the Statue and Pedestal.

Because the museum first floors design elevation is required to be above the 13 foot base flood elevation it will be built 10 feet higher than the adjacent Flag Plaza. Despite the raised first floor, the rooflines will be within the existing tree lines, which will minimize its presence from approaching

Cumulative Impacts

In 2012, Hurricane Sandy inundated much of Liberty Island, resulting in damage to the infrastructure, grounds, and landscaping. Multiple projects have been completed and/or are proposed to aid the restoration and recovery of the island, including a new generator building adjacent to the existing incinerator, repair to administrative and support buildings and utilities, walkway repair and replacement, and replacement of underground exterior lighting of the Statue. These past and future projects have/will enhance visitor amenities and aesthetics, restore function to visitor amenities, and generally repair features destroyed in the storm. Hurricane Sandy recovery projects have or will restore and recover the infrastructure, grounds, and landscaping on the island and result in island-wide improvements to visitor

comforts and amenities. Replacement of damaged or dying trees and vegetation helps maintain the original vision for the Statue rising above the tree covered island. Future replacement of the temporary security screening tent with a permanent structure will allow the screening process to operate more efficiently, meet 21st century security needs, and improve aesthetics by removing the large white tent. While construction activities associated with these projects will be noticeable and will close portions of the island to visitors, the impacts on visitors and their experience will be temporary, and at no point will the entirety of Liberty Island be closed to visitors. Long term, these projects will provide noticeable improvements to the visitor experience at Liberty Island. When combined with the beneficial impacts of the new museum under alternative 2, cumulative impacts on visitor use and experience at Liberty Island would be long term and beneficial.

Conclusion

The operation of a new museum on Liberty Island exhibiting artifacts and providing interpretive history would improve the visitor experience on the island and would provide long-term, beneficial impacts on visitor use and experience by introducing new exhibits, opportunities, and user comforts that would enhance the depth of the visitor experience. The new museum would increase the amount of public space to 15,000 square feet, including exhibit space, a bookstore, and restrooms. This increase in space would enable more of the items currently in storage to be made available for viewing and allow more of the public to experience the museum pieces. Artifacts would be moved out of the existing museum in the Pedestal, which is only available to visitors with Pedestal access tickets, into the new museum, thereby increasing the number of visitors who could interact with the historical aspects of the monument. Museum design features that provide for free-flowing traffic through the exhibits would minimize waiting lines and enable more visitors to walk through and experience the exhibits. The new museum would also provide more shelter on the island during storm events and improve the visitor experience during such periods. These changes would be a substantial improvement over the existing condition. Operating a new museum on Liberty Island that is not located in the Pedestal would enhance visitor comfort and provide a fuller experience, resulting in long-term, beneficial impacts on visitor use and experience and would contribute substantially to the overall, beneficial cumulative impacts.

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CHAPTER 4: CONSULTATION AND COORDINATION

This chapter provides a detailed list of the various consultations initiated and public involvement during the development of the environmental assessment.

LIST OF AGENCIES AND TRIBES CONSULTED

Agency consultation began early in the environmental assessment process and is ongoing to ensure that all relevant agencies are informed of any NPS planning actions. The following agencies have been or are being consulted:

- Advisory Council on Historic Preservation
- Delaware Nation
- Delaware Tribe
- National Marine Fisheries Service
- New Jersey Department of Environmental Protection
- New Jersey Historic Preservation Office
- New York City Department of City Planning
- New York City Landmarks Preservation Commission
- New York State Department of Environmental Conservation
- New York State Department of State
- New York State Office of Parks, Recreation, and Historic Preservation
- Stockbridge-Munsee Tribe
- United Nations Educational, Scientific and Cultural Organization World Heritage Committee
- United States Army Corps of Engineers
- United States Fish and Wildlife Service

PUBLIC INVOLVEMENT

NEPA regulations require an “early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action” (40 CFR 1501.7). The National Park Service initiated a formal public engagement process for the development of the Statue of Liberty Museum by issuing a scoping letter on November 2, 2015. To inform the public of the scoping process, a presentation describing the background, purpose, and need for the new museum and how to comment was made available on the NPS Planning, Environment, and Public Comment website. This presentation described the project and project area; provided the purpose, need, and objectives for the project; provided illustrated preliminary design concepts; and outlined the regulatory processes for the National Environmental Policy Act and section 106 of the National Historic Preservation Act. In order to reach a broad audience, the presentation and information about public scoping were shared with the public in a variety of ways. Scoping letters were mailed or e-mailed to interested parties and agencies on November 2, 2015. A press released was created announcing public scoping, which received coverage from a variety of news media and advocacy organizations. Social media, including Facebook, was also used during the scoping period to inform the public about the planning effort. Members of the public were asked to share

their thoughts, concerns, and vision for the new museum between November 2, 2015, and December 9, 2015. During the public scoping period, a total of 22 individual correspondences were received.

Commenters expressed mixed levels of support for the construction of a new museum and suggested features both related to the physical design of the new museum and its interpretive content. Most commenters responded that they had no concerns or where not aware of other natural resource issues or historic properties and many stated agreement that the proposed Area of Potential Effect was sufficient.

CHAPTER 5: ACRONYMS

Code of Federal Regulations	(CFR)
Council on Environmental Quality	(CEQ)
Federal Flood Risk Management Standard	(FFRMS)
Leadership in Energy and Environmental Design	(LEED)
National Environmental Policy Act	(NEPA)
National Park Service	(NPS)
National Register	(National Register of Historic Places)
Park	(Statue of Liberty National Monument)

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CHAPTER 6: REFERENCES

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- 2015 Flood Insurance Rate Map (FIRM) for the City of New York, New York—Bronx, Richmond, New York, Queens, and Kings Counties. Panel 3604970183G. Revised Preliminary January 30, 2015. Accessed November 2, 2015. <http://msc.fema.gov/portal>.

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- 2011 Director's Order 12: *Conservation Planning, Environmental Impact Analysis, and Decision-making.* Washington, DC.
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- 2015b Clearance Report: Clearance Report: Proposed Temporary Dock Structure STLI. Prepared by David Conlin, Chief, Submerged Resources Center, National Park Service Intermountain Region, November 17, 2015.
- 2015c National Register of Historic Places Nomination Form. Statue of Liberty National Monument.
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APPENDIX A: STATEMENT OF FINDINGS FOR FLOODPLAIN MANAGEMENT

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STATEMENT OF FINDINGS FOR
EXECUTIVE ORDER 11988 (FLOODPLAIN MANAGEMENT)

New Museum Construction at Liberty Island
Environmental Assessment
Statue of Liberty National Monument

Recommended:

Superintendent,
Statue of Liberty National Monument

Date

Certification of Technical Adequacy
and Servicewide Consistency

Chief,
Water Resource Division

Date

Approved:

Director,
Northeast Region Office

Date

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STATEMENT OF FINDINGS

INTRODUCTION

The National Park Service (NPS) is preparing an environmental assessment for the proposed construction of a new museum at Statue of Liberty National Monument on Liberty Island (the park) in New York Harbor.

Executive Order 11988, “Floodplain Management,” requires federal agencies to evaluate the likely impacts of actions in floodplains, avoid “adverse impacts associated with the occupancy and modification of floodplains, and avoid direct and indirect support of floodplain development wherever there is a practicable alternative.” If federal actions must take place in a floodplain, the agency is required to minimize potential impacts on human, safety, health, and welfare and the risk of flood losses, and to protect and restore natural, beneficial floodplain values.

Floodplains provide benefits to human and natural environments. Coastal floodplains protect people and property from storm surges and wave action. Floodplain land provides habitat for plants, fish, and wildlife and, thus, is ecologically important because it sustains ecosystem integrity and biodiversity and minimizes erosion and sedimentation. Floodplains provide groundwater recharge or discharge and can improve water quality. Undisturbed floodplains provide scenic value and opportunities for educational and recreational activities.

Director’s Order 77-2: *Floodplain Management* and the Procedural Manual 77-2: *Floodplain Management* provide NPS policies and procedures for complying with Executive Order 11988. Pursuant to Director’s Order 77-2, the National Park Service must strive to preserve floodplain values and minimize hazardous floodplain conditions (NPS 2003). Additionally, Executive Order 13690, “Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input,” and the associated Federal Flood Risk Management Standard (FFRMS) reinforce the guidelines stated in Executive Order 11988. FFRMS encourages the consideration of existing natural features during the development of alternatives. Executive Order 13690 and FFRMS guides the National Park Service and other federal agencies to use a higher flood elevation to ensure that proposed projects account for uncertainties associated with climate change.

A Statement of Findings is required because the proposed project site would be located within the 100-year floodplain. The following Statement of Findings identifies elements of the proposed project located within the 100-year floodplain and mitigation measures designed for the proposed project to comply with NPS floodplain management procedures.

PROPOSED ACTION

The Statue of Liberty National Monument is located on Liberty Island in New York Harbor. Recent life-safety upgrades at the Statue of Liberty have led to revised and reduced occupancy levels inside the monument. Only 20% of visitors to Liberty Island are able to explore the museum inside the Statue of Liberty. The remaining visitors to the island have grounds-only tickets, and limited space is available for visitors to sit or take shelter during inclement weather conditions.

The proposed action includes the construction of a new 20,000-square-foot museum on Liberty Island. The proposed museum would be located in the northwest portion of the island adjacent to the Administration Building. The museum would be elevated on a raised concrete structure to raise it above flood level. Steps leading to the building from the Flag Plaza would also serve as a stage and seating arrangement around the plaza. The steps are needed so that the building can be constructed above the floodplain. A vegetated roof would minimize the impervious surface of the project area. A proposed

temporary construction pier would be constructed on the northern side of the island to facilitate the movement of construction materials to and from the island. Upon completing construction of the museum, the pier would be dismantled and removed.

The purpose of the museum construction project is to move the existing Liberty Island Museum from the Pedestal of the Statue to a new facility on the island. The new museum would provide a richer interpretive experience that would be available to all visitors and would provide indoor space for visitors during inclement weather. The new museum is being designed and sited to (a) respect the Secretary of the Interior's *Standards for the Treatment of Historic Properties*; (b) defer to the Statue, historic buildings, and the landscape elements determined by the National Park Service to be contributing features; and (c) be in accord with preservation planning documents issued for Liberty Island. The new museum is also being designed to be resilient to future climate change.

The construction of the new museum would disturb existing pervious and impervious areas. Unrelated to this project, housing unit buildings (42, 43, and 44) on the proposed museum site were flooded and damaged beyond repair during Hurricane Sandy and have been demolished. New water/sewer lines would be placed to support the new construction. Existing trees, some damaged by Hurricane Sandy, and other vegetation would be removed and replaced.

SITE DESCRIPTION

The site for the proposed project is over previously disturbed fill soil and has a grade of approximately 7 to 9 feet above the North American Vertical Datum of 1988 (NAVD88).

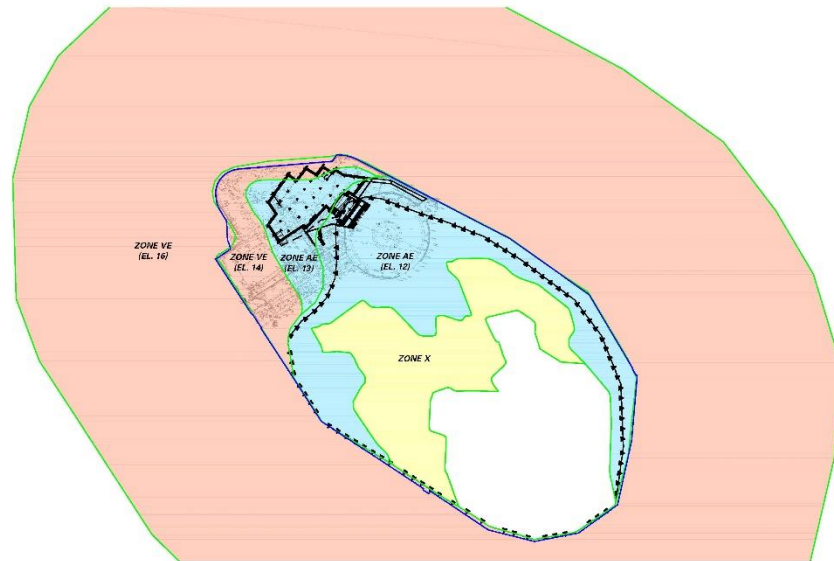
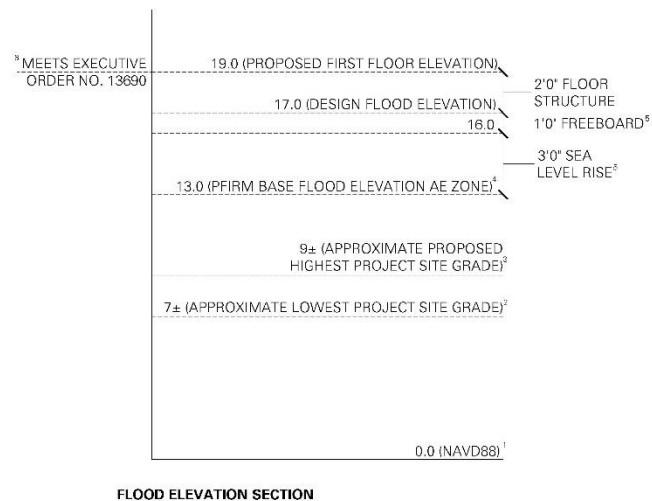
For a specific community, the Federal Emergency Management Agency produces a Flood Insurance Rate Map that identifies special hazard areas and the risk premium zones applicable to the community. The Federal Emergency Management Agency revised the effective floodplain for Liberty Island and issued a preliminary Flood Insurance Rate Map on January 30, 2015 (panel number 3604970183G). The National Park Service's partner, The Statue of Liberty – Ellis Island Foundation, has designed the proposed museum based on the preliminary Flood Insurance Rate Map.

The entire site for the proposed museum on Liberty Island is within the preliminary 100-year floodplain, with the majority of the site also located within the Limit of Moderate Wave Action (FEMA 2015) (figure A-1). A "100-year floodplain" or "100-year flood" describes an area or event subject to a 1% probability of a certain size flood occurring in any given year. The Limit of Moderate Wave Action is defined as the approximate landward limit of the 1.5-foot wave height. A VE flood zone, or 100-year floodplain with additional hazards from storm-induced velocity wave action (wave heights greater than 3 feet), extends up to approximately 120 feet landward from the shoreline along the northwestern portion of Liberty Island and encompasses a small portion of the northern part of the proposed site for the new museum. A Coastal AE flood zone, or 100-year floodplain with wave heights between 3.0 and 1.5 feet, encompasses the majority of the proposed site for the new museum. An AE flood zone, or 100-year floodplain with wave heights less than 1.5 feet, encompasses a small area in the southeast portion of the proposed museum site. The water surface elevations of the 100-year flood vary across the proposed site for the new museum from 14 feet in the VE flood zone to 12 feet in the AE flood zone (FEMA 2015). Excluding the Statue and immediate surrounding land, a large portion of the rest of Liberty Island is within flood zone X, or the 500-year floodplain (figure A-1). A "500-year floodplain" or "500-year flood" describes an area or event subject to a 0.2% probability of a certain size flood occurring in any given year.

FLOOD ELEVATION

FLOOD ELEVATION

THE FIRST FLOOR OF THE MUSEUM WILL BE RAISED TO ELEVATION ± 19.00 (NAVD88) TO ACCOUNT FOR THE FEMA 100-YEAR BASE FLOOD ELEVATION AND THE REQUIREMENTS OF THE EXECUTIVE ORDER ENTITLED 'ESTABLISHING A FEDERAL FLOOD RISK MANAGEMENT STANDARD AND A PROCESS FOR FURTHER SOLICITING AND CONSIDERING STAKEHOLDER INPUT' ISSUED ON JANUARY 30, 2015. REFER TO THE FLOOD ELEVATION SECTION AND CORRESPONDING NOTES BELOW FOR FURTHER INFORMATION.



FLOOD ELEVATION SECTION NOTES:

1. ALL ELEVATIONS SHOWN ARE IN THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
2. ELEVATION SHOWN IS FROM SURVEY INFORMATION PER "PARTIAL TOPOGRAPHIC SURVEY" PREPARED BY CONTROL POINT ASSOCIATES, INC. DATED 9/5/2014.
3. ELEVATION SHOWN IS PER THE 100% SCHEMATIC DESIGN SUBMISSION DATED 09-18-2015.
4. BASE FLOOD ELEVATION IS PER FEMA PRELIMINARY FIRM PANEL NO. 3604970183G, REVISED JANUARY 30, 2015 (SEE ABOVE).
5. CALCULATIONS SHOWN HEREON BASED ON THE U.S. DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE LEVEL 3 HANDBOOK ENTITLED "ADDRESSING CLIMATE CHANGE AND NATURAL HAZARDS - FACILITY PLANNING AND DESIGN CONSIDERATIONS" DATED JANUARY 2015.
6. PER THE EXECUTIVE ORDER ENTITLED 'ESTABLISHING A FEDERAL FLOOD RISK MANAGEMENT STANDARD AND A PROCESS FOR FURTHER SOLICITING AND CONSIDERING STAKEHOLDER INPUT' RELEASED ON JANUARY 30, 2015, SPECIFICALLY SECTION 6(c), THE PROJECT WILL FALL UNDER SCENARIO (ii) FOR CRITICAL ACTIONS AND REQUIRES AN ADDITIONAL 3-FEET OF FREEBOARD TO BE ADDED TO THE BASE FLOOD ELEVATION.

3

STATUE OF LIBERTY MUSEUM
SCHEMATIC DESIGN PROGRESS

LANGAN | F X FOWLE

Source: LANGAN 2015

FIGURE 1: PRELIMINARY 100-YEAR FLOODPLAIN

JUSTIFICATION FOR USE OF THE FLOODPLAIN

The entire site for the proposed new museum is located within a floodplain. Although the National Park Service is under executive order and policy to reduce or eliminate development in floodplains, this is not possible for the proposed action because most of Liberty Island is within a flood zone. Figure A-1 shows that except for the Statue and the land immediately surrounding it, the rest of Liberty Island is within a flood zone. Additionally, the proposed action is key to opportunities for enjoyment of the monument and visual impacts on the Statue would preclude use of the land surrounding the Statue that is not within a flood zone. Therefore, although the construction of the new museum must occur within the floodplain, the extent of development, placement of structures, and types of structures and associated facilities would be selected to minimize impacts.

Coastal flooding in the vicinity of Liberty Island results from storm systems with large amounts of precipitation and storm surges. Peak storm-tide readings at gages around Liberty Island for Tropical Storm Irene in August 2011 ranged from approximately 6 feet to almost 9 feet above NAVD88 (Lumia et al. 2014). Liberty Island also experienced major flooding associated with Hurricane Sandy in October 2012. Approximately 75% of the island was covered by flood waters up to 11 feet as a result of the storm surge (FEMA 2013; NPS 2015). Nearby Battery Park, on Manhattan Island, experienced floodwaters up to 13.8 feet deep (NPS 2015). Floodwaters at Liberty Island would likely be observable and predictable well in advance of arrival at the monument, and it is not anticipated that visitors or staff would be at risk or need to be evacuated.

Impacts on floodplains would result from the construction of a new structure and impervious surface within the 100-year floodplain. The new museum would be constructed within the floodplain, adding to the risk of flooding associated with hurricanes and other storms. However, the new museum facility would be elevated to protect it against storm forces and floodwaters and constructed using flood proofing standards, which would help reduce property losses and risk to human safety from flooding. The construction of a new museum on Liberty Island in the floodplain would result in long-term, localized, negligible risk to the structures and insignificant changes to the flood profile.

MITIGATION ACTIONS

As stated in Director's Order 77-2, if the National Park Service determines a facility must be placed within an area subject to natural hazards, then the "design and siting will be based on a thorough understanding of the nature of the physical processes and avoiding or mitigating (1) the risks to human life and property, and (2) the effect of the facility on natural physical processes and the ecosystem."

The National Park Service finds that the only practicable alternative is to site the new museum construction within a floodplain. Therefore, requirements within Executive Order 11988 state that the National Park Service must construct the museum to comply with the standards of the National Flood Insurance Program, including elevating the structure above flood elevation and using flood proofing and other flood protection measures. Furthermore, a notice must be circulated explaining why the new museum must be constructed within a floodplain.

The proposed museum would be constructed on a raised concrete structure with a first floor elevation of 19 feet above NAVD88 to account for the 100-year flood and sea level rise and to meet NPS design requirements. The design will conform to the requirements of Executive Order 13690 and FFRMS that require the first floor elevation to be 3 feet above the base flood elevation. This floodplain is used in order to accommodate potential current and future flood risks and uncertainties associated with climate change as described under the Federal Flood Risk Management Standard Freeboard Value Approach and ensure that proposed actions would not increase the flood risk. Additionally, other flood proofing measures would be implemented as required by the National Flood Insurance Program to reduce the potential hazards to human safety and property from flooding.

During the project development process and construction, measures to minimize and mitigate impacts on sensitive resources would be applied. During site preparation, existing vegetation would be removed only as required and to the limits necessary to construct the proposed project. Final site restoration would include the revegetation of all areas previously disturbed by construction activities. Native plant seed mixtures and plant materials approved by monument staff would be used to rehabilitate and revegetate disturbed areas. Erosion and sediment control measures would be designed in accordance with federal, state, and local regulations, requirements, and codes and the specifications of the best management practices. Examples include silt fences, inlet protection, sediment basins, vegetative buffers, swales, flow diversions, and dams/barriers (NYS DEC 2005).

SUMMARY

Although the proposed action would be located within the 100-year floodplain, because of the nature of the site, the use of floodplain mitigation techniques such as additional elevation and flood proofing would prevent an increase in the flood threat and protect the new structure from potential flood events. Compliance with applicable standards, regulations, and policies to minimize impacts on floodplain resources and loss of property or human life would be strictly adhered to during and after the construction. With these measures, the proposed action would not alter flood flows and would have negligible effects on floodplain functions or values.

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APPENDIX B: DRAFT MEMORANDUM OF AGREEMENT

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*MEMORANDUM OF AGREEMENT**AMONG*

THE NATIONAL PARK SERVICE, STATUE OF LIBERTY NATIONAL MONUMENT

NEW YORK STATE HISTORIC PRESERVATION OFFICER

NEW JERSEY HISTORIC PRESERVATION OFFICER

DELAWARE TRIBE

STOCKBRIDGE-MUNSEE BAND OH MOHICANS

ADVISORY COUNCIL ON HISTORIC PRESERVATION

CONCERNING CONSTRUCTION OF LIBERTY ISLAND MUSEUM

WHEREAS, the Statue of Liberty Enlightening the World (the Statue) and Fort Wood, on which it is situated, is managed by the National Park Service (NPS) as part of the Statue of Liberty National Monument (Park), listed in the National Register of Historic Places (1981), designated as a New York City Landmark, and the Statue's setting on Liberty Island is anticipated to be listed as part of a pending historic district in June; and

WHEREAS, the Superintendent is the responsible agency official for purposes of compliance with Section 106 of the National Historic Preservation Act, as defined in 36 Code of Federal Regulations (CFR) 800.2, and is accountable to the Regional Director for full performance of Section 106 compliance through the NPS Management Policies, and procedures for performance and program evaluation; and

WHEREAS, recent life-safety upgrades have led to reduced occupancy levels inside the Statue, necessitating the need for a richer interpretive experience that would be available to all visitors; and

WHEREAS, the Statue of Liberty-Ellis Island Foundation has a long history of fundraising for major historic preservation efforts, including but not limited to the restoration of the Statue of Liberty in the 1980s and the restoration of the Main Immigration Building at Ellis Island in the 1990s and will be responsible for designing, building and endowing the proposed museum with National Park Service oversight; and

WHEREAS, the Statue of Liberty-Ellis Island Foundation and the National Park Service engaged the NJSHPO and NYSHPO in informal consultation beginning in February, 2013, with an additional on-site meeting in June, 2014 and January, 2016, and have continued consulting on the proposed design of the museum used information from these meetings to inform the design development for the undertaking in terms of location, size, height, materials and programming; and

WHEREAS, the National Park Service coordinated scoping for the National Environmental Policy Act and Section 106 of the National Historic Preservation Act and solicited public comment on the effects of the project from November 2, 2015 through December 9, 2015 and took public comments into account while developing this Memorandum of Agreement; and

WHEREAS, the National Park Service has determined that the Area of Potential Effect (APE) includes the entire Liberty Island, although construction activity will be limited to the northwestern portion of the island; and

WHEREAS, the project area has been the focus of multiple archaeological investigations that identified a heavily modified landscape composed of fill deposits and no potentially significant archaeological resources; and

WHEREAS, the addition of a new feature to Liberty Island will have an adverse impact on the setting of the Statue, pending historic district, and New York City Landmark by changing the setting and feeling of a portion of the island; and

WHEREAS, in lieu of the standard process pursuant to 36 CFR 800, the National Park Service has instead elected to execute a Memorandum of Agreement to define consultation between the above-referenced parties and to outline the process and schedule for this Undertaking's consultation and any required mitigation; and

WHEREAS, the National Park Service has contacted the Delaware Nation, the Delaware Tribe of Indians, and the Stockbridge-Munsee Community to inform them of the Undertaking and the Delaware Tribe and Stockbridge-Munsee Band of Mohican Indians have elected to participate in the consultation process and have been invited to sign this Memorandum of Agreement as signatories; and

WHEREAS the National Park Service has also consulted with the New York City Landmarks Preservation Commission and the Statue of Liberty-Ellis Island Foundation, Inc. and invited them to join as concurring parties; and

WHEREAS, the National Park Service has conducted an Environmental Assessment (EA) for new museum construction at the Statue and coordinated review of the draft of this Memorandum of Agreement with the EA which was completed on June Day, 2016; and

WHEREAS, the National Park Service has informed the Advisory Council on Historic Preservation (ACHP) of the Undertaking (construction of the museum) and its potential adverse effect, and the ACHP has elected to participate in the development of this Memorandum of Agreement; and

NOW, THEREFORE, the National Park Service and the above referenced parties agree that the Undertaking shall be implemented in accordance with the following stipulations.

STIPULATIONS

The National Park Service will ensure that the following measures are carried out relative to the museum project.

Consultation

1. The National Park Service will consult with the parties in carrying out the terms of this Memorandum of Agreement. Such consultation may include, but is not be limited to:
 - Written correspondence;
 - Conference calls;
 - Face-to-face meetings;
 - Field visits.
2. The above referenced parties agree to respond to requests for review within thirty (30) days of receipt of complete documentation. If no response is received within thirty (30) days of receipt, the National Park Service may assume agreement with its findings, conclusions, and/or recommendations.
3. The National Park Service has and will submit draft drawings for the Liberty Island Museum to all consulting parties for review and comment prior to completing the final construction documents and before construction is commenced.
4. The National Park Service will ensure that all recordation/documentation activities are performed or directly supervised by architects, historians, archeologists, or other professionals meeting the qualification standards in the Secretary of Interior's Professional Qualification Standards (36 CFR 61, Appendix A).

Archeological Monitoring and Documentation

1. The National Park Service will conduct archeological monitoring for any activities reaching depths deeper than 7 feet, or per archeological findings within the EA.
2. In the event that potentially significant archaeological resources are encountered during the project, the National Park Service will determine, in consultation with the SHPOs, the Delaware Tribe of Indians, the Stockbridge-Munsee Band of Mohicans, and the New York City Landmarks Preservation Commission, if terrestrial archeological investigations are necessary, and will develop an agreed-upon scope of work if they determine that such investigations are needed. All archeological investigations will be conducted in a manner consistent with the Secretary of the Interior's Standards and Guidelines for Archeological Documentation, and the scope of work, research design, end-of-fieldwork memorandum, and archeological reports will be provided to the SHPO and the three aforementioned tribes for review and comment. In the event that the National Park Service, the SHPO, and, as appropriate, the tribes agree that significant archeological resources have been discovered by the excavations, additional consultation will occur to determine the effect the Undertaking will have on these resources and to resolve any Adverse Effects in accordance with 36 CFR 800.
3. The National Park Service will ensure that all field records are assembled, including field notes compiled by the archeologists, site sketches, superintendent reports, and construction reports. These records will be accessioned into the Park's museum collection, as well as the National Park Service's Technical Information Center.
4. The National Park Service will provide copies of all documents resulting from the documentation/recordation to the SHPO, as they are received by the National Park Service.

Mitigation of Adverse Effects

The National Park Service, as mitigation for any adverse effects to historic properties realized during the Undertaking, will at a minimum:

1. If it is determined that Native American archeological resources will be adversely affected, consult with the appropriate tribes on a process for mitigating the adverse effects;
2. Complete standard documentation of construction activities and data recovery as necessary;
3. NPS will move forward with projects to improve the Statue of Liberty setting including:
 - a. Repaving the Approach and Main Malls damaged by Hurricane Sandy and subsequent construction work on the Island
 - b. Relocating secondary screening operations and replacing the current temporary tent with a permanent facility away from the primary view shed between the Monument Entrance and the Museum
 - c. Replacing salt damaged and or dying trees with more salt-tolerant species

NPS recognizes that each of these actions will undergo S106 review and consultation in its own right.

Inadvertent Resource Discoveries

If during construction activities previously unknown archeological resources or are discovered, all work in the immediate vicinity of the discovery will be halted and the procedures of 36 CFR Part 800.13[c] followed. In the event that Native American human remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered, all work in the immediate vicinity of the discovery will be halted and the procedures of 43 CFR § 10.3 will be carried out, including taking immediate steps to protect the discoveries *in situ*, notification of the appropriate tribes, tribal consultation, and the development and execution of a Plan of Action.

Interpretive Strategy

The National Park Service shall develop an interpretive strategy to educate the public about the proposed work while construction is ongoing.

Monitoring of Construction Activities

The National Park Service will monitor construction activities pursuant to this Memorandum of Agreement, and allow the SHPOs to participate in any construction monitoring after the SHPOs provide the National Park Service at least 24 hours notification beforehand. The Park will cooperate with the SHPO in carrying out any monitoring and review responsibilities.

Dispute Resolution

Disputes regarding the completion of the terms of this Memorandum of Agreement shall be resolved by the signatories. If the signatories cannot agree regarding a dispute, the National Park Service or SHPOs may request the participation of the ACHP to assist in resolving the dispute. Any recommendation or comment provided by the ACHP will be understood to pertain only to the

subject of the dispute. The National Park Service's responsibility to carry out all actions under this Memorandum of Agreement that are not the subjects of dispute will remain unchanged.

At any time during implementation of the measures stipulated in this Agreement, should an objection to any such measure be raised by a member of the public, the National Park Service shall take the objection into account and consult as needed with the objecting party and the SHPOs.

Amendment of Memorandum of Agreement

The Memorandum of Agreement may be modified by amendment at any time by mutual concurrence of all parties. Amendment of the Memorandum of Agreement as necessary shall be accomplished in the same manner as the original agreement. Amendments will be in writing and approved by the original signatories or their designated official.

Termination of Memorandum of Agreement

Any party to this Memorandum of Agreement may terminate it by providing thirty (30) calendar days' notice to the other parties, provided that the parties consult during the period prior to termination to seek agreements on amendments or other actions that would avoid termination. In the event of termination by the SHPOs, the National Park Service will request the comments of the ACHP, in accordance with 36 CFR Part 800.7[a].

Reporting

Within ninety (90) days after the completion of the Undertaking, the National Park Service shall provide a written receipt to the SHPO as to the actions taken to fulfill the terms of the Agreement.

Term of Memorandum of Agreement

This Memorandum of Agreement shall become effective after the date of the last signatory. The Memorandum of Agreement shall be null and void if its terms are not carried out within five (5) years from the date of its approval, unless the signatories agree in writing to an extension for carrying out its terms. Otherwise, this Memorandum of Agreement shall become null and void when the Undertaking is complete, all of the above stipulations are fulfilled, and the SHPO has been provided with the aforementioned written reply as to the actions taken to fulfill the terms of the Memorandum of Agreement. The Memorandum of Agreement and any amendments shall be binding upon the parties, their successors, and assigns.

Execution of this Memorandum of Agreement and implementation of its terms evidences that the National Park Service afforded all appropriate parties with the opportunity to comment on the Undertaking and its effects on the Statue, that the National Park Service has taken into the account the effect of the Undertaking on historic properties, and that the National Park Service has satisfied its Section 106 responsibilities for the Undertaking referenced in this Memorandum of Agreement.

MEMORANDUM OF AGREEMENT

LIBERTY ISLAND MUSEUM
AUTHORIZING SIGNATURES

NATIONAL PARK SERVICE

By: _____ Date: _____
John Piltzecker
Superintendent, State of Liberty National Monument

NEW YORK STATE OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION

By: _____ Date: _____
Rose Harvey
Commissioner and SHPO, New York State Office of Parks, Recreation and Historic Preservation

NEW JERSEY STATE HISTORIC PRESERVATION OFFICE

By: _____ Date: _____
Daniel Saunders, Administrator and Deputy State Historic Preservation Officer

DELAWARE TRIBE OF INDIANS

By: _____ Date: _____
Susan Bachor, Delaware Tribe Historic Preservation Representative

STOCKBRIDGE-MUNSEE BAND OF MOHICAN INDIANS

By: _____ Date: _____
Bonney Hartley, Tribal Historic Preservation Officer

CONCURRING SIGNATURES

NEW YORK CITY LANDMARKS PRESERVATION COMMISSION

By: _____ Date: _____
Meenakshi Srinivasan, Chair

STATUE OF LIBERTY-ELLIS ISLAND FOUNDATION, INC.

By: _____ Date: _____
Stephen A. Briganti
President and Chief Executive Officer, Statue of Liberty-Ellis Island Foundation, Inc.

DELAWARE NATION

By: _____ Date: _____
Jason Ross

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As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering wise use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historic places, and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people. The department also promotes the goals of the Take Pride in America campaign by encouraging stewardship and citizen responsibility for the public lands and promoting citizen participation in their care. The department also has major responsibility for American Indian reservation communities and for people who live in island territories under US administration.

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United States Department of the Interior – National Park Service